

ABSTRACT

The aqueous-based cross-linkable binder composition comprising

(A) an aqueous dispersion of an aldehyde-functional polyurethane having a number average molecular weight of more than 1,000 and an average aldehyde functionality of ≥ 2 , which polyurethane comprises ionic and/or non-ionic dispersing groups, and

(B) a low-molecular weight aldehyde-reactive cross-linker selected from the group of low-molecular weight polyamines and low-molecular weight compounds comprising at least one group of one of the formulae $E^1\text{-CHR}^1\text{-E}^2$ and $\text{H-C-(E}^1\text{E}^2\text{E}^3)$, wherein -E^1 , -E^2 and -E^3 are independently chosen from electron-withdrawing groups such as -P(=O)-O- , -CO- , -CN , $\text{-SO}_2\text{-}$, -NO_2 and wherein R^1 has the meaning of hydrogen or a hydrocarbon radical having 1 to 10 carbon atoms.

Preference is given to a coating composition wherein the ionic dispersing group is an anionic dispersing group selected from the group of carboxylate, sulphonate and/or phosph(on)ate salt groups, and/or wherein for the nonionic dispersing group use is made of a $\text{C}_1\text{-C}_4$ alkoxy poly $\text{C}_2\text{-C}_3$ alkylene-oxide group in an amount between 2.5 and 20 wt.%, based on the polyurethane.